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(54) **EQUIPMENT FOR MANUFACTURING HOT DIP GALVANIZED HOT ROLLED STEEL SHEET EXCELLENT IN LUBRICITY AND CHEMICAL CONVERSION**

kinds selected from Mn, Mo, P, Co, Ni, W, V and B are exemplified.

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(57) Abstract:

PURPOSE: To give excellent lubricity and chemical conversion by providing an oxide film forming equipment for improving lubricity on continuous hot dip galvanizing line and forming inorganic oxide film on galvanized steel sheet surface.

CONSTITUTION: Hot rolled steel sheet (strip) 1 is introduced into pickling equipment 2 and surface oxide caused by hot rolling is pickled and is washed with a cleaning device 3. Next, the steel sheet is heated within optimum temperature range and then is dipped into hot dip galvanizing plating bath 6 and is plated. As necessary, the steel sheet is subjected to heating and alloying treatment in an alloying furnace and is cooled down nearly to a normal temperature and then a galvanized steel sheet shape is straightened with a skin pass rolling mill 9. Afterthat, the steel sheet is introduced into the oxide film forming equipment 20 for improving lubricity and press formability is enhanced by forming the inorganic oxide film. As the inorganic component of oxide film for this sake, one kind or  $\approx$  two

